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Sphodrocepheus mitratus, the Second Representative of the Genus Found in Central Japan (Acari; Cryptostigmata)

With 7 Text-figures

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(Communicated by K. TAKEWAKI)

ABSTRACT *Sphodrocepheus mitratus* spec. nov. of the family Cepheidae (Acari; Cryptostigmata) is described from Mt. Haruna, Gunma Prefecture, Japan. The genus *Sphodrocepheus* has hitherto been known only from N. America and also monotypic. The new species differs from the type-species in the structure of lamellae, location, length as well as the texture of notogastral setae and some other features.

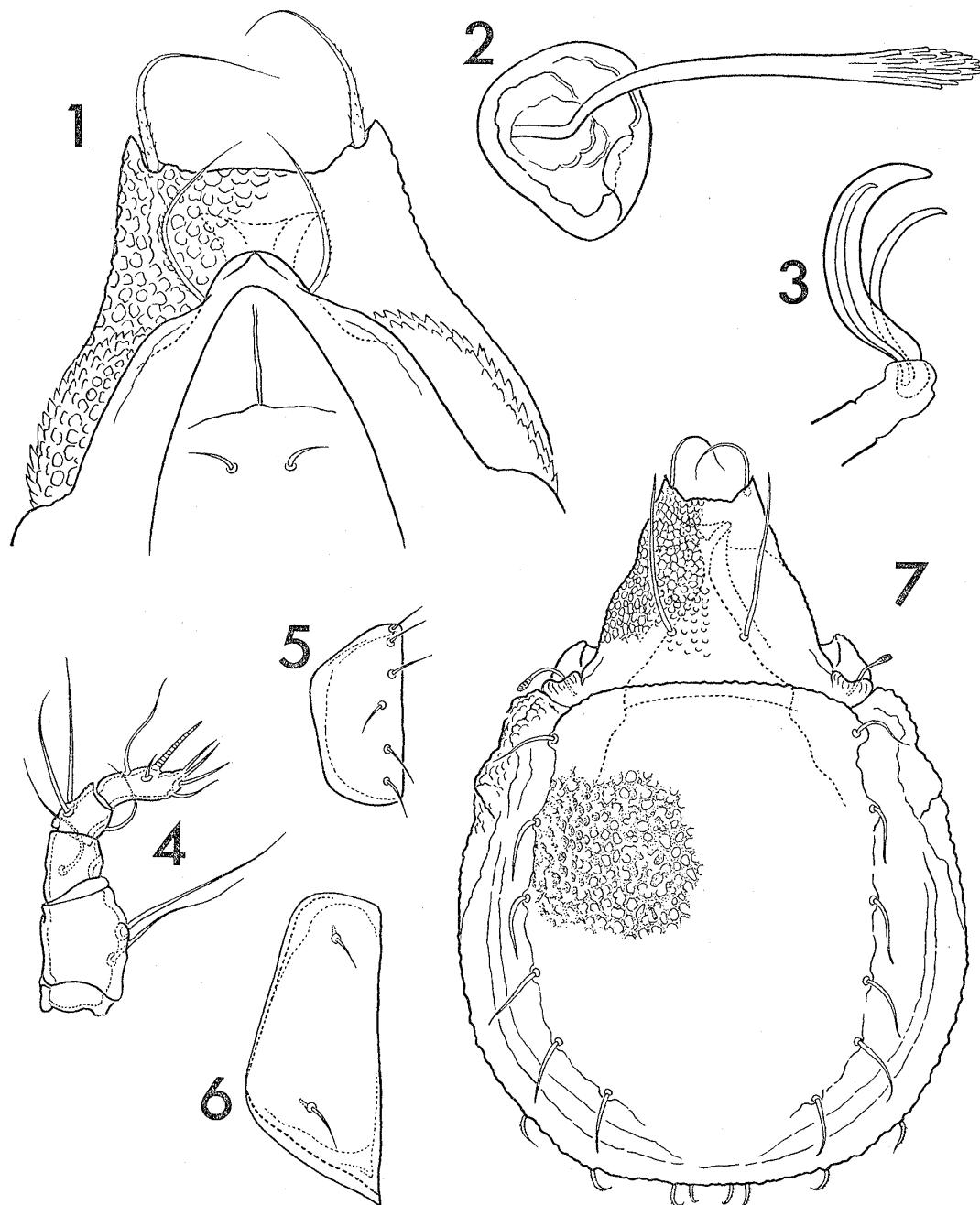
The genus *Sphodrocepheus* (family Cepheidae) was established recently by Wooley and Higgins (1962) based on new material, *S. tridactylus*, collected from Utah and other regions in U.S.A. The genus has been monotypic and its distribution has hitherto been restricted to N. America. I found in Central Japan a species belonging to the genus, but apparently differing from the American species, and I described it as a new species representing a second species of the genus *Sphodrocepheus*.

Sphodrocepheus mitratus Aoki, spec. nov.

Material examined. Holotype(NSM-AC-A 30) and 2 paratypes: Mt. Haruna, Gunma Prefecture, Central Japan; under rotten wood on the floor of a *Quercus-Alnus*-forest; 9-XI-1965. J. Aoki; deposited in the National Science Museum, Tokyo.

Measurement. Length (lamellae excluded): 790–840 μ ; width: 600–650 μ .

Prodorsum. Lamellae well developed and broadly fused to each other on the median line; they project anteriorly far beyond the tip of rostrum, so that any part of the rostrum cannot be seen in the dorsal aspect; the anterior tips of lamellae rather sharply triangular, being connected medially by translamella which has a straight anterior margin. Lamellar setae strongly curled, thick and barbed at the basal portion, becoming rather suddenly thin on the distal half;



Figs. 1-7. *Sphodrocephalus mitratus* Aoki, spec. nov. 1. Anterior part of propodosoma (ventral view). 2. Sensillus. 3. Claws of leg I. 4. Palp. 5. Genital plate. 6. Anal plate. 7. Dorsal side.

they are situated subterminally on the inner edge of lamellar cuspides. In the lateral view of propodosoma, a large space exists between lamellar cuspides and rostrum; the anterior tip of rostrum (in lateral view) has a broad indentation, forming upper and lower edges; the former, in ventral view, smoothly rounded anteriorly, while the latter pointed and directed anteroventrad. Rostral setae

finely barbed and inserted at level closer to the lower edge. Interlamellar setae long and glabrous; their tips sharply pointed, but not so fine like those of lamellar setae; the mutual distance about 1/2 as long as the setae themselves. Sensillus club-shaped and has a roughened head which is not prominent, but slightly broader than the stalk. A conspicuous tutorium is present on each side of rostrum; it is observed as a dark, arched ridge in lateral view and as a large, rounded swelling with toothed edge in ventral view (Fig. 1).

Notogaster. Slightly longer than broad; the anterior border nearly straight medially and with a notch inside the humeral projection on each side. Six pairs of curved, smooth setae situated rather marginally on dorsal side; a faint ridge connecting longitudinally all the insertions of these setae on each side; the anteriormost pair of setae located at a level somewhat posterior to dorsosejugal suture and their mutual distance nearly the same as those of the succeeding setae, i.e. they do not deviate from the longitudinal setal rows. Four pairs of setae inserted on the marginal field of notogaster; they are distinctly barbed and equal to each other in length (about 1/1.4-1/1.6 as long as dorsal setae).

Anogenital region. Anal and genital apertures separated from each other with an interspace shorter than the diameter of the latter; ratio in length of genital aperture, the interspace and anal aperture is about 6:4:9-10. Both apertures pentagonal and provided with 2 and 6 pairs of fine setae, respectively (Figs. 5 and 6). Three pairs of adanal and 1 pair of aggenital setae; *ad*₃ situated at level between *an*₁ and *an*₂, somewhat closer to the latter; the distance *ad*₁-*ad*₂ either equal to, or shorter than, *ad*₁-*ad*₁.

Pedotecta. Pedotectum I is a large swelling with reticulated surface. *Pd*. 2 far smaller than *pd*. 1, being situated outside epimeral plate II and with the outer

Table 1

	<i>S. tridactylus</i> Woolley and Higgins	<i>S. mitratus</i> spec. nov.
Rostrum	covered by lamellae except the anterior tip	completely covered by lamellae
Interlamellar setae	finely pectinate	almost smooth
Anterior margin of trans-lamella	weakly concave	straight
Anterior margin of notogaster	roundly curved medially	nearly straight medially
Anteriormost setae of notogaster	deviated outwards from the setal rows	located nearly on the setal rows, or rather inside of them
Each longitudinal row of dorsal setae	located midway between lateral margin and median line of dorsum	located closer to lateral margin than to median line
Setae <i>p</i> ₁ and <i>p</i> ₂	shorter than <i>p</i> ₃ and <i>p</i> ₄	equal in length to <i>p</i> ₃ and <i>p</i> ₄
Body size	720×570 μ	790-840×600-650 μ
Distribution	North America	Central Japan

margin obliquely cut. *Pd. 3* is a small (smaller than *pd. 2*) rectangular plate with the outer margin indented, being located in contact with *pd. 2*. *Pd. 4* (=tectopodium III of Wooley and Higgins, 1962) tongue-shaped and nearly as large as *pd. 2*.

Legs. Formulae of a total setae on legs I-IV (tarsus-tibia-genu-femur) are: I(22-6-4-5), II(18-5-4-4), III(15-4-3-3) and IV(12-4-3-3). Formulae of solenidia: I(2-2-1), II(2-1-1), III(0-1-1) and IV(0-1-0). Solenidia ω_1 and ω_2 of leg I inserted side by side at the same level; both of them nearly straight; ω_2 with a fine tip and a little longer than ω_1 with rather blunt tip; *tc* and *pl'* of tarsus I conspicuously long; the anterodorsal seta on femur I has a peculiar shape, being thick, densely barbed and strongly curved. Solenidia of leg II are of the same shape, being well separated and arranged longitudinally. On tarsi I and II, one of the ventral setae has a few, strong pectinations and therefore different in shape from the remaining ventral setae densely barbed. Tarsi III and IV have a rather flat, dorsal side; *pv''* of tarsus IV thick and blunt at tip. All the legs heterotridactylous (Fig. 3).

Remarks. The present species is distinguishable from *Sphodrocepheus tridacylus* Woolley and Higgins, 1962 (the type-species of the genus) by many features as shown in the Table 1).

REFERENCE

Woolley, T. A. and H. G. Higgins 1962 J. N. Y. Ent. Soc., 71, 143.